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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HIT667

Silicon NPN Epitaxial

REJ03G1505-0300

Rev.3.00

Jun 23, 2009

Features

- Low frequency power amplifier
- Complementary pair with HIT647

Outline

RENESAS Package code: PRSS0003DC-A
(Package name: TO-92 Mod)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|--------------------|-------------|------|
| Collector to base voltage | V_{CBO} | 120 | V |
| Collector to emitter voltage | V_{CEO} | 100 | V |
| Emitter to base voltage | V_{EBO} | 6 | V |
| Collector current | I_C | 1.0 | A |
| Collector peak current | $I_{C(peak)}^{*1}$ | 2.0 | A |
| Collector power dissipation | P_C | 0.9 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

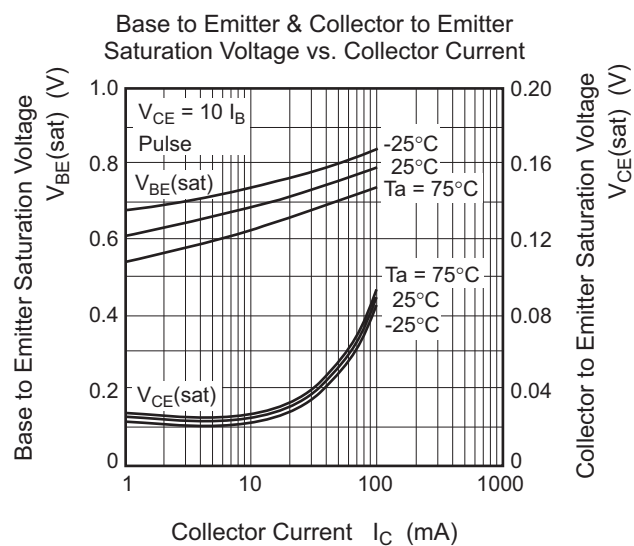
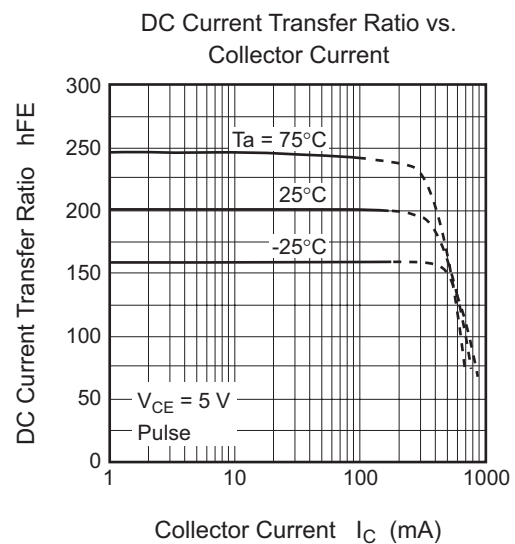
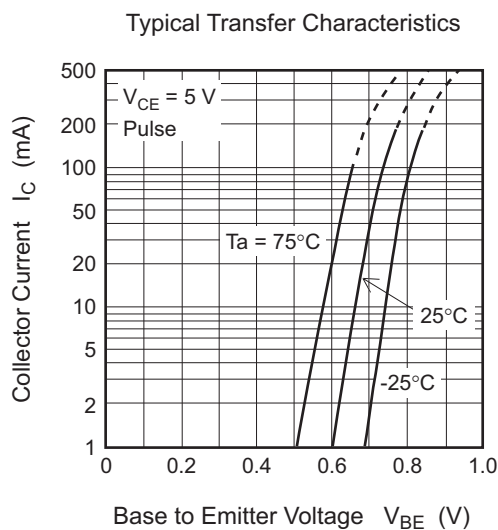
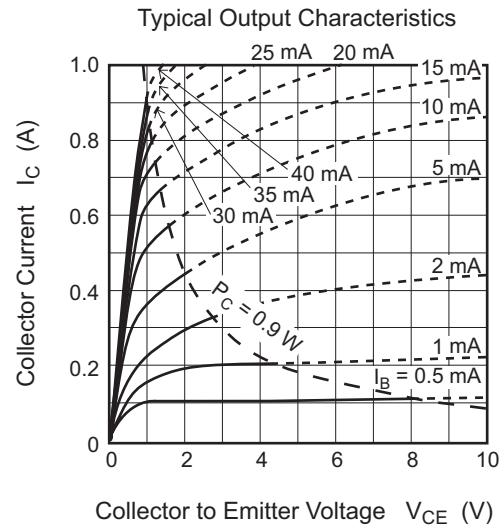
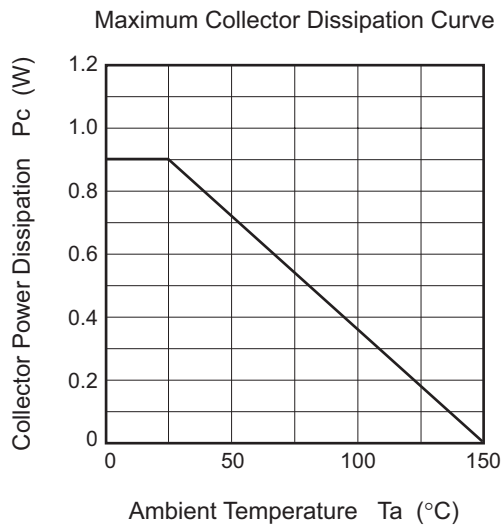
Note : 1. $PW \leq 10$ ms, Duty cycle $\leq 20\%$

Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-----|------|---------------------------------|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 120 | — | — | V | $I_C = 100\ \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 100 | — | — | V | $I_C = 10\ mA, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 6 | — | — | V | $I_E = 100\ \mu A, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 500 | nA | $V_{CB} = 120\ V, I_E = 0$ |
| Emitter cutoff current | I_{EBO} | — | — | 500 | nA | $V_{EB} = 6\ V, I_C = 0$ |
| DC current transfer ratio | h_{FE1} | 140 | — | 330 | — | $V_{CE} = 2\ V, I_C = 150\ mA$ |
| | h_{FE2} | 40 | — | — | — | $V_{CE} = 5\ V, I_C = 1\ A$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 0.5 | V | $I_C = 500\ mA, I_B = 50\ mA$ |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | — | — | 1.1 | V | $I_C = 500\ mA, I_B = 50\ mA$ |

Main Characteristics



Package Dimensions

| Package Name | JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] | Unit: mm |
|--------------|--------------------|--------------|------------------------|------------|----------|
| TO-92 Mod | SC-51 | PRSS0003DC-A | TO-92 Mod / TO-92 ModV | 0.35g | |

Technical drawing of the HIT667 TO-92 package showing dimensions in mm:

- Top View:** Width 4.8 ± 0.4 , Pin pitch 1.27 , Overall width 2.54 .
- Side View (Left):** Body width 4.8 ± 0.4 , Body height 8.0 ± 0.5 , Pin diameter 0.65 ± 0.1 , Pin length 2.3 Max, Pin thickness 0.7 , Pin spacing 10.1 Min. Lead dimensions: 0.75 Max, 0.60 Max, 0.55 Max.
- Side View (Right):** Body width 3.8 ± 0.4 , Lead length 0.5 Max.

Ordering Information

| Part Name | Quantity | Shipping Container | Remarks |
|--------------|-----------|-------------------------|--------------------------------|
| HIT667-EQ | 2500 pcs. | Bulk, Vinyl Bag | PB free product |
| HIT667-TZ-EQ | 2500 pcs. | Hold Box, Radial Taping | |
| HIT667-HQ | 2500 pcs. | Bulk, Vinyl Bag | Halogen free & PB free product |
| HIT667-TZ-HQ | 2500 pcs. | Hold Box, Radial Taping | |

Note: This product is designed for consumer use and not for automotive or industrial use.

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